

ABSTRACT

An obstacle detection system includes a laser radar sensor that emits laser beams for scanning a two-dimensional detection area ahead of a vehicle and receives reflected beams in a form of reflecting dots representing the obstacle such as a preceding vehicle. To effectively detect a preceding vehicle traveling on a curved road, a reference angular direction in which the preceding vehicle is most probably located is set based on a traveling speed of the own vehicle and a calculated radius of the curved road. The reflecting dots are selected from those located closer to the reference angular direction until they reach a predetermined number, thereby forming a target model. The preceding vehicle is detected based on the target model.